

Work Order ID 163516

Tuesday, June 27, 2017 1:28:49 PM

163516

Page 1

Item ID: D412-705-021 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Oil Pressure Transmitter Access
 Start Date: 6/27/2017 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 7/4/2017 Req'd Qty: 1.00 ***1*** Customer:

Reference:

DAS

Approvals: Process Plan: 21 Date: JUN 28 2017 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr	DAS							
IIN D412-705	F	6 9-89	JUL 18 2017						
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPPD412-705-021	CHG003							
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.03							
Quality Control									

DAS
28
9-89
JUL 24 2017

JUL 21 2017 
 DAS
26
9-89

DAS
28
9-89
JUL 24 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 163516

Tuesday, June 27, 2017 1:28:49 PM

163516

Page 2

Item ID: D412-705-021

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Oil Pressure Transmitter Access

Start Date: 6/27/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 7/4/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Packaging	Identify as per dwg & Stock Location: _____ Packaging	0.00				DAS 28 9-80		JUL 24 2017	
Packaging	Memo Identify and pack for shipping as per PPP D412-705-021 Location: FG023	0.00							
140 *140* QC	QC21- Final Inspection - Work Order Release	0.00							
Quality Control	Memo	0.10							

JUL 24 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause		FAULT CATEGORY																							
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		OTHER : ☐																							

Picklist Print

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Page 1

Work Order ID: 163516

163516

Parent Item: D412-705-021

D412-705-021

Parent Item Name: Oil Pressure Transmitter Access

Start Date: 6/27/2017

Required Date: 7/4/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:a new issue 08-08-05 DD verified by: EC
ECN 12-670 12.11.07 DD Verified by:JLM

IPP Rev:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN3C3A

Purchased

No

110

Each

136.0000

6

6

AN3C3A

Bolt

**

Location

Loc Qty

Loc Code

GA

7

m136182

7

ST350

129

m137820

120

m137886

9

D3307-041

Manufactured

No

110

Each

4.0000

1

1

D3307-041

Access Panel Assembly LH

**

Location

Loc Qty

Loc Code

ST030

4

147977

2

156289

2

MS20427M3-3

Purchased

No

110

Each

1,472.000

12

12

MS20427M3-3

Rivet

**

Location

Loc Qty

Loc Code

GA

427

m134738

427

ST311

1045

m136741

1045

DAS
28
9-89

DAS
28
9-89

DAS
28
9-89

JUL 21 2017

DAS
26
9-89

JUL 21 2017

DAS
26
9-89

JUL 21 2017

DAS
26
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
																						OTHER : ☐																																									

Picklist Print

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Page 2

Work Order ID: 163516

163516

Parent Item: D412-705-021

D412-705-021

Parent Item Name: Oil Pressure Transmitter Access

Start Date: 6/27/2017

Required Date: 7/4/2017

Start Qty: 1.00

Required Qty: 1.00

MS21060-L3K

Purchased

No

110

Each

61.0000

6

6

MS21060-L3K

Nut Plate

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

27

m135297

27

ST300

34

m136835

9

m137820

25

**

JUL 21 2017

DAS
26
9-89

MS9321-09

Purchased

No

110

Each

282.0000

6

6

MS9321-09

Washer

DAS
28
9-89

Location

Loc Qty

Loc Code

ST267

282

m136740

282

**

JUL 21 2017

DAS
26
9-89

Tuesday, June 27, 2017 1:28:52 PM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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 Start Date: 6/27/2017 Start Qty: 1.00 ***1*** Cust Item ID:
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Approvals: Process Plan: _____ Date: JUN 28 2017 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr	JUL 18 2017							
100	Document Control	0.00							
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DC	Memo	0.00							
Doc. Control -USB or Paperwork	Photocopy bluefile & type labels per PPPD412-705-021		CHG003						
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110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.03							
Quality Control									

DAS
DA
15
8-89
9-1



Transport Canada

Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH04-25

Issue No.: 1

Approval Date: April 21, 2004

Issue Date: April 21, 2004

Responsible Office:

Prairie and Northern

Aircraft/Engine Type or Model:

BELL 212, 412, 412 CF, 412 EP

Canadian Type Certificate or Equivalent:

H-86

Description of Type Design Change:

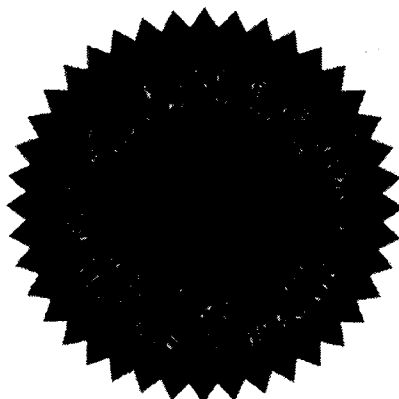
TWIN PAK EASY ACCESS KITS

Installation/Operating Data,
Required Equipment and Limitations:

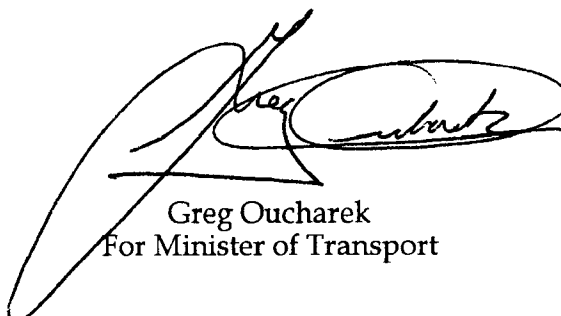
Installation of Twin Pak E-Z Access Kit to be in accordance with Transport Canada approved DART AEROSPACE LTD. Installation Instructions, IIN-D412-705, Revision A, dated February 20, 2004 or later Transport Canada approved revision.

Instructions for Continuing Airworthiness described in DART AEROSPACE LTD. document number ICA-D412-705, Initial Issue dated March 09, 2004 or later revision are required with this installation.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.



Greg Oucharek
For Minister of Transport

Canada

5.0 PARTS LIST

Qty -011	Qty -013	Qty -015	Qty -017	Qty -019	Qty -021	Qty -023	Part Number	Description
X							D412-705-011	TWIN PAK E-Z ACCESS KIT
1	X						D412-705-013	INTAKE PLENUM ACCESS PANEL KIT
1		X					D412-705-015	DRIVESHAFT TUNNEL MODIFICATION KIT
1			X				D412-705-017	N1 GEARBOX ACCESS PANEL KIT
1				X			D412-705-019	C-BOX OIL COOLER LINE SUPPORT ACCESS KIT
1					X		D412-705-021	OIL PRESSURE TRANSMITTER ACCESS KIT
1						X	D412-705-023	OIL COOLER SUPPORT REMOVABLE LOWER PANEL KIT
	1						D3245-041	ACCESS PANEL ASSEMBLY, LH
	1						D3245-042	ACCESS PANEL ASSEMBLY, RH
	2						D3245-043	DOOR ASSEMBLY
	2						D3245-9	GASKET
	2						D3245-11	GASKET
	2						D3245-13	GASKET
			1				D3255-041	ACCESS PANEL ASSEMBLY, LH
			1				D3255-042	ACCESS PANEL ASSEMBLY, RH
		1					D3256-1	ACCESS PANEL
		1					D3256-3	GASKET
				1			D3259-041	ACCESS PANEL ASSEMBLY, LH
				1			D3259-042	ACCESS PANEL ASSEMBLY, RH
					1		D3307-041	ACCESS PANEL ASSEMBLY
						30	AN3-3A	BOLT
		22	30		6		AN3C3A	BOLT
		3					AN3C4A	BOLT
						30	AN980JD10	WASHER
	16	44	36		12		MS20427M3-3	* RIVET
						4	MS21051-L3K	NUT PLATE
	8	22	18		6		MS21060-L3K	NUT PLATE
						18	MS21069-L3K	NUT PLATE
		25	30		6		MS9321-09	WASHER

* Acceptable to substitute for MS20615M3-3 rivets. At installation, it is acceptable to use longer rivets if required.